CorDEX INSTRUMENTS
SAFER | FASTER | BETTER

ToughPIX 2300XP Series
USER GUIDE

II 2G

I M2

Ref. ID 2320, Rev. A

Email: sales@cord-ex.com
www.cordexinstruments.com

CONTENTS

1. INTRODUCTION 1
Overview 1
Package Contents 1

2. GETTING TO KNOW YOUR CAMERA 2
Front View 2
Rear View 3
LCD Monitor Display 4
Video Mode 5
Playback mode Still image playback 5
Playback mode Video playback 5

3. GETTING STARTED 6
Preparation 6
Turning the Power On/Off 6
Choosing the Language 7
Formatting the Memory Card or Internal Memory 7

4. TAKING PICTURES 8
Capturing Images 9
Setting the Scene Mode 9
Adjusting the Exposure (EV Compensation) 10

5. TAKING VIDEOS 11
Recording Video Clips 11

6. VIEWING PHOTOS AND VIDEOS 12
Playing Back Still Images 12
Playing Back Video Clips 13
Slideshow Display 14
Protecting Images 15
Canceling the Protection 15
Erasing Images 16

7. MENU OPTIONS 17
Capture Menu 17
Scene Mode 17
Size 17
EV 18
ISO 18
Quality 18
White Balance 18
Sharpness 19
Color 19
Saturation 19
Metering 19
Video Menu 20
Size 20
Quality 20
Color 20
Playback Menu 21
Delete 21
Slide Show 21
DPOF 21
Protect 21
Copy to Card 21
Setup Menu 22
Language 22
Auto Off 22
Beep 22
Display 22
Fr. No. Reset 22
Light Freq. 22
LED Bright. 22
Format 22
Media Info 22
Sys. Info. 22
System Reset 22

8. DOWNLOADING FILES 23
System Requirement 23
Downloading Your Files 23

9. TECHNICAL INFORMATION 24
Specifcation 24

1. INTRODUCTION

OVERVIEW

Congratulations on your purchase of the ToughPIX 2300XP digital camera. The ToughPIX 2300XP is flameproof for use in Ex (potentially explosive environments. Equipped with a 5.0 megapixel sensor, this camera is capable of capturing images with a resolution of 2560 x 1920 pixels.

The camera has a 16MB internal memory (11.5Mb available for internal storage) and can be ordered with an optional memory expansion of 4GB or 8GB. This cannot be removed and must be specified at the time of order. Images can be downloaded using the USB socket.

PACKAGE CONTENTS

Carefully unpack your ToughPIX 2300XP and ensure that you have the following items:

- ToughPIX 2300XP Series Digital Camera
- ToughPIX 2300XP Series Battery
- Safe Area Charging Station
- USB Communication Wand
- Hard Case
- Software & Documentation CD
- M3 Allen Key

2. GETTING TO KNOW YOUR CAMERA

FRONT VIEW

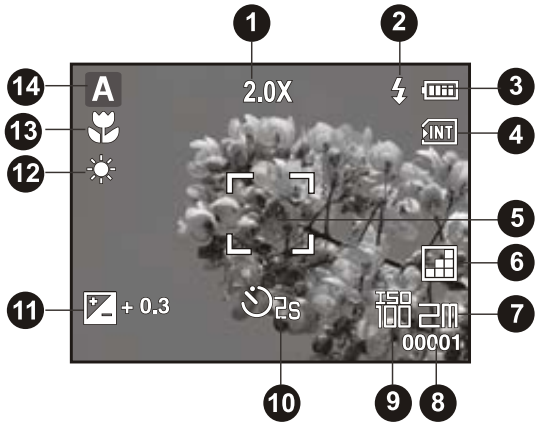
1. Shutter Button
2. Power Button
3. Flash
4. Lens
5. Self-timer LED
6. Battery Compartment
7. USB Connector Compartment

REAR VIEW

1. LCD Monitor Screen
2. OK button
   Digital Zoom button
3. 4-Way control button
   - ▲ Up button
   - MENU Menu button
   - ▶ Right button
   - ϟ Flash button
   - ▼ Down button
   - MODE Mode button
   - ◀ Left button
   - Self-timer button
4. Playback button

Ref. ID 2310, Rev. A

LCD MONITOR DISPLAY



1. Zoom status

2. Flash mode

[blank] Auto Flash
Flash On
Force Off
Red-eye

3. Battery condition

Full battery power
Medium battery power
Low battery power
No battery power

4. Storage media

Internal memory
SD/SDHC memory card

5. Main focus area

6. Image quality

Fine
Standard
Economy

7. Image size resolution

10M 3648 x 2736*
8M 3264 x 2448*
5M 2560 x 1920
3M 2048 x 1536
1.3M 1280 x 960
VGA 640 x 480
[* FW interpolation]

8. Available number of shots

9. ISO

[blank] Auto
ISO 50 50
ISO 100 100
ISO 200 200

10. Self-timer icon

2 sec
10 sec.

11. Exposure compensation

13. White balance

[blank] Auto
Incand.
Fluorescent 1
Fluorescent 2
Daylight
Cloudy

13. Focus setting

Normal (Blank)
Macro (not available on this model).

14. Mode indication

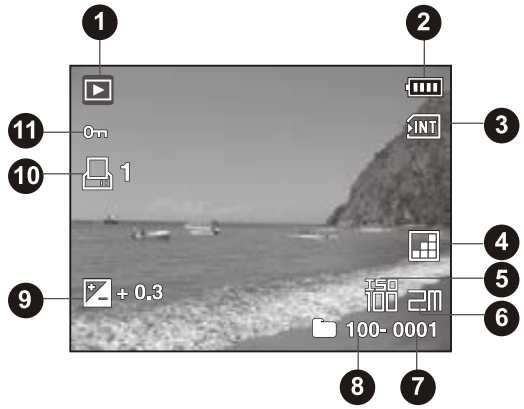
Auto Mode
Sport Mode
Night Mode
Portrait Mode
Landscape Mode
Backlight Mode
Program AE

Video mode

1. Flash mode
2. Battery condition
3. Storage media
4. Main focus area
5. Video quality
6. Video Resolution
7. Available recording time/Elapsed time
8. Self-timer icon
9. Focus setting
10. Mode icon

Playback mode - still image playback

1. Mode icon
2. Battery condition
3. Storage media
4. Image quality
5. ISO
6. Image size resolution
7. File number
8. Folder number
9. Exposure value
10. DPOF icon
11. Protect icon



Playback mode - Video playback

1. Video status bar
2. Elapsed time
3. File number
4. Folder number
5. Play mode
6. Mode icon
7. Protect icon
8. Total recorded time

Ref. ID 2310, Rev. A

3. GETTING STARTING

PREPARATION

NEVER OPEN THE BATTERY OR USB COMPARTMENTS IN A HAZARDOUS ENVIRONMENT.

1. Open the camera's battery compartment.
   Remove the six retaining screws using the supplied Allen key.
2. Load the battery pack paying careful attention to the orientation of the pack.
3. Close the battery cover, replace the screws and make sure the cover is locked securely.

TURNING THE POWER ON/OFF

- Press and hold down the POWER button until the camera turns on.
- To turn the power off, press the POWER button again.

The camera has an AUTO OFF feature: the camera turns off automatically when the camera has not been operated for a fixed period of time (see page 22). To resume the operation condition, turn the power on again.

CHOOSING THE LANGUAGE

Specify in which language menus and messages are to be displayed on the LCD monitor.

1. Press the **MENU** button.
2. Select (Setup) menu with the ▶ button.
3. Select (Language) with the ▲/▼buttons, and press the **OK** button.

   The Language setting screen is displayed.
4. Select the displayed language with the ▲/▼ buttons, and press the **OK** button.

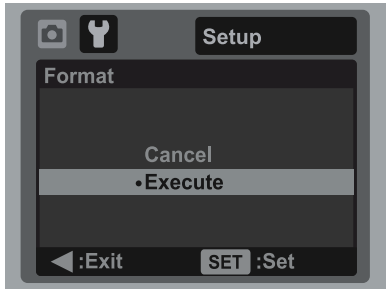
   The setting will be stored.

FORMATTING THE MEMORY CARD OR INTERNAL MEMORY

This utility formats the internal memory (or memory card) and erases all stored images and data.

1. Press the **MENU** button.
2. Select (Setup) menu with the ▶ button.
3. Select (Format) with the ▲/▼buttons, and press the **OK** button.
4. Select (Execute) with the ▲/▼buttons, and press the **OK** button.

   To cancel the formatting, select (Cancel) and press the **OK** button.



Ref. ID 2310, Rev. A

4. TAKING PICTURES

CAPTURING IMAGES

1. **Switch the camera on.**
   Press the Power button to turn the power on.
2. **Compose the image on the preview screen**.
   If necessary, use the Zoom function to magnify the scene. Press the **ok** button to zoom in on the subject. The digital magnification ranges from 1.0x to 6.0x. Note that the more the image is magnified, the grainier the image may become.

   When you record video clips, the zoom function is not available.
3. **Choose a Flash mode.**

   Press the button to choose a flash mode:

   [blank] Auto Flash: Let the camera choose when to use the flash.

   Always On: Always use the flash.

   Flash Off: Never use the flash.

   Red eye reduction.

   The flash has an effective range of 0.9-1.5m (35-59”).
4. If you do not want to use the camera’s automatic settings, select a special **SCENE MODE** (see “Setting the Scene Mode”, opposite).
5. Press the shutter button to capture the image.

SETTING THE SCENE MODE

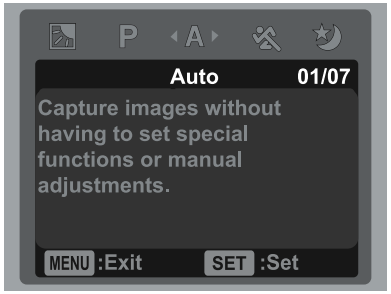
The camera has six scene mode settings for the following

Auto:	Let the camera choose the settings.
Sport:	Fast moving subjects.
Night:	Dark scenes such as night views.
Portrait:	Make the foreground stand out against a defocused (blurred) background.
Landscape:	Capture an image with infinity focus, high sharpness and high saturation.
Backlight:	Capture images when the light comes from behind the object.
Program AE:	Manually set parameters other than shutter speed and aperture value.

To set a scene mode:

1. Press the **MENU** button.
   The Capture Menu is displayed.
2. Use the ▲/▼ buttons to select Scene Mode.
3. Press the **OK** button.
4. Use the ▲/▼buttons to select the required mode.
5. Press the **OK** button.
6. Press the ◀ button to exit the menu.

   Whenever you switch the camera on, the **AUTO** scene mode is selected.



Ref. ID 2310, Rev. A

ADJUSTING THE EXPOSURE (EV COMPENSATION)

You can manually adjust the exposure used by the digital camera. Use this mode when the proper exposure cannot be obtained, for example, when the contrast between the subject and the background is extremely large. The EV compensation value can be set in the range from -2.0EV to +2.0EV.

To change the EV setting:

1. Press the **menu** button.
   The Capture Menu is displayed.
2. Use the ▲/▼ buttons to select EV.
3. Press the **ok** button.
4. Use the ▲/▼ buttons to change the EV compensation value in the range 2.0EV to +2.0EV.
5. Press the **ok** button to save the new setting; press the ◀ button to exit the menu without saving any change.
6. Press the ◀ button to exit the menu.

Using EV Compensation Effectively

+(positive) compensation

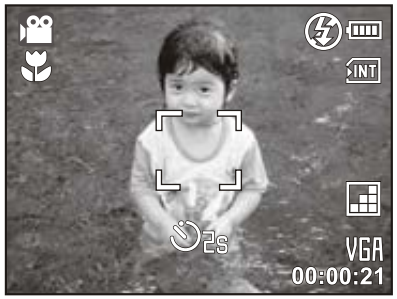
* Printed matter with black text on whitish paper.
* Bright scenes, strong reflected light, when the background is bright and the subject is dark. When the subject has a light source such as the sun behind it.
* When the sky accounts for a large area on the screen.

-(negative) compensation

* People illuminated by a spotlight, in particular, against dark background.
* Printed matter with white text on blackish paper.
* Weak reflecting bodies such as evergreen trees or darkish leaves

RECORDING VIDEO CLIPS

This mode allows you to record video clips at a resolution of VGA (640 x 480) or QVGA (320 x 240) pixels.



1. Press the **MODE** button to set the camera mode to
2. Compose the image.
3. Press the shutter button.

   The recording of the video clip will start.

   Pressing the shutter button one more time will end the recording of the video clip.

   The recording time depends on the storage size and the subject of the image to be recorded.

When recording a video clip, the flash cannot be used.
If the write speed of selected memory is not fast enough for recording video clips in the currently selected size, the video recording will stop. In this case, select a video size lower than the current one.
The maximum recordable time for one continuous video clip is 00:59:59.

Ref. ID 2310, Rev. A

6. VIEWING PHOTOS AND VIDEOS

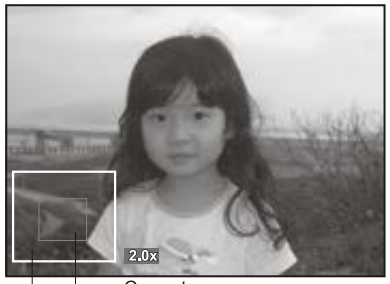
PLAYING BACK STILL IMAGES

You can play back the still images on the LCD monitor.

1. Press the button.
   The last image appears on the screen.
2. The images can be displayed in forward or reverse sequence with the ◀ / ▶ buttons.

   To view the previous image, press the ◀ button.

   To view the next image, press the ▶ button.
3. Press the **OK** button to adjust the zoom ratio.
   The magnification factor (1.0x to 4.0x) is displayed on the LCD monitor.
4. To view different portion of the images, press the ▲/▼ button to adjust the display area.



An icon is displayed with the video data.
The magnifcation factors range from 1x to 4x (within 4 stages: 1.0x, 2.0x, 3.0x, and 4.0x).

PLAYING BACK VIDEO CLIPS

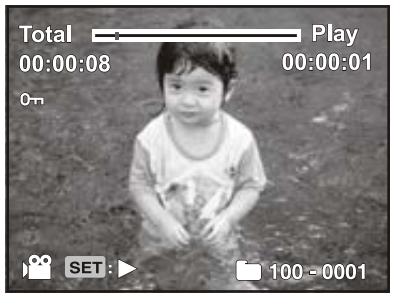
You can play back recorded video clips on the camera.

1. Press the button.
   The last image appears on the screen.
2. Select the desired video clip with the ◀ / ▶ buttons.
3. Press the **OK** button.

   A press of the ▶/ ◀ buttons during playback allows fast forward play / fast reverse play.

   To stop video playback, press the ▼ button. This stops playback and returns to the start of the video clip.

   To pause video playback press the **OK** button. This pauses video playback. To cancel pause, press the **OK** button again.



Video clips cannot be displayed rotated or enlarged.
This camera does not have a built-in speaker and microphone. Audio function is not available.
To play the video clip back on your computer, you may use either Windows Media Player or Apple "QuickTime Player".
QuickTime basic player is available free of charge, compatible with Mac and Windows computers and can be downloaded from the Apple web site at www.apple.com. For help using QuickTime Player usage, please refer to the QuickTime on-line help for more information.

Ref. ID 2310, Rev. A

SLIDESHOW DISPLAY

The slideshow function enables you to playback your still images automatically in order one image at a time.

1. Press the button.
2. Press the **MENU** button.
   The playback menu is displayed.
3. Select [Slide Show] with the ▲/▼ buttons, then press the **OK** button.
4. Select the desired interval time with the ▲/ ▼ buttons: 3 Sec. / 5 Sec. / 10 Sec.
   Press the **OK** button. The slideshow starts.
5. To stop the slide show during playback, press the **OK** button.
   The image is displayed on screen when you press the **OK** button.

The Auto Off function does not operate during slide show.
All still images in the folder are played back automatically.
Video files display the first frame image and are not played back.

PROTECTING IMAGES

Set the data to read-only to prevent images from being erased by mistake.

1. Press the button.
2. Select the image that you want to protect with the ◀ / ▶ buttons.
3. Press the **MENU** button.
4. Select [Protect] with the ▲/▼ buttons, and press the **OK** button.
5. Select [Single] or [All] with the ▲/▼buttons, and press the **OK** button.
   [Single]: Protects the selected image or the last image.
   [All]: Protects all of the images.
6. Select [Set] with the ▲/▼ buttons, and press the **OK** button.

   Protection is applied to the image and the camera returns to the previous menu mode.

The protect icon is displayed with protected images.

Cancelling the Protection

To cancel protection for only one image, display the image on which you want to remove the image protection.

1. Select [Protect] with the ▲/▼ buttons from the playback menu, and press the **OK** button.
2. Select [Single] or [All] with the ▲/▼buttons, and press the **OK** button.
3. Select [Cancel Protect] with the ▲/▼ buttons, and press the **OK** button.

   The removal of image protection is executed and the camera returns to the previous menu mode.

Formatting an SD/SDHC memory card or internal memory overrides protection, and erases all images regardless of their protected status.

Ref. ID 2310, Rev. A

ERASING IMAGES

Erasing a single image / Erasing all images

1. Press the button.
   The last image is displayed on the screen.
2. Select the image you want to erase with the ◀ / ▶ buttons.
3. Press the **MENU** button.
4. Select [Delete] with the ▲/▼ buttons and press the **OK** button.
5. Select [Single] or [All] with the ▲/▼ buttons, and press the **OK** button.

   [Single]: Erases the selected image or the last image.

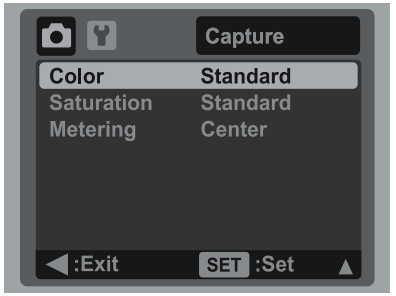
   [All]: Erases all of the images except for the protected images.
6. Select [Execute] with the ▲/▼ buttons, and press the **OK** button.

   Select [Cancel] if you decide not to erase the image, and press the **OK** button.

Deleting an image does not change sequential image numbering. For example, if you delete image number 240, the next captured image will be numbered 241 even though 240 no longer exists. In other words, an image-number is retired when an image is deleted and will not be reused or reassigned to another subsequently captured image.

CAPTURE MENU

This menu is for the basic settings used by the camera to capture still images.



1. Press the **MODE** button to set the camera mode to Camera.
2. Press the **MENU** button.
3. Select the desired option item with the ▲ /▼ buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the ▲/▼ buttons, and press the **OK** button.
6. To exit from the menu, press the ◀ button.

SCENE MODE

Refer to “Setting the Scene Mode” on page 9 for further details.

SIZE

This sets the size of the captured image.

10M	10M (3648 x 2736 pixels) (FW interpolation)
8M	8M (3264 x 2448 pixels) (FW interpolation)
5M	5M (2560 x 1920 pixels)
3M	3M (2048 x 1536 pixels)
1.3M	1.3M (1280 x 960 pixels)
VGA	VGA (640 x 480 pixels)

Ref. ID 2310, Rev. A

EV
Refer to section in this manual titled “Adjusting the Exposure (EV Compensation)” for further details.

ISO

ISO AUTO ISO 100 ISO 200	Sets the sensitivity for capturing images. When the sensitivity is raised (and the ISO figure is increased), photography will become possible even in dark locations, but the image will appear more pixelated (grainier).

QUALITY
This sets the quality (compression) at which the image is captured.

	Fine
	Standard
	Economy

WHITE BALANCE
Sets the white balance for a variety of lighting conditions and permits images to be captured that approach the conditions that are seen by the human eye.

[blank]	Auto
	Incandescent
1	Fluorescent 1
2	Fluorescent 2
	Daylight
	Cloudy

SHARPNESS
Sets the sharpness of the image.
* Hard / Normal / Soft

COLOR
Sets the color of the image.
*Standard/Vivid/Sepia/B&W

SATURATION
Sets the saturation of the image.
* High / Standard / Low

METERING
Sets the metering method for calculating the exposure.

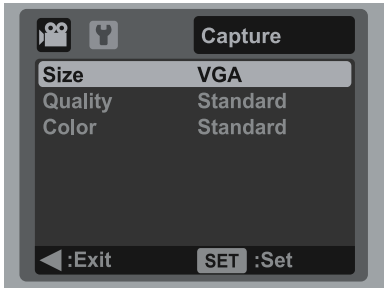
Center: Averages the light metered from the entire frame, but gives greater weight to the subject matter at the center.

Spot: A very small portion of the center of the screen is measured, and the exposure is calculated.

Average: The entire area of the screen is measured, and the exposure is calculated.

VIDEO MENU

This menu is for the basic settings to be used when recording video clips.



1. Press the **MODE** button to set the camera mode to
2. Press the **MENU** button.
3. Select the desired option item with the ▲/▼ buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the ▲/▼ buttons, and press the **OK** button.
5. To exit from the menu, press the ◀ button.

SIZE

This sets the resolution of the video clip that will be captured.

VGA 640 x 480

QVGA 320 x 240

QUALITY

This sets the quality (compression) at which the video clip is captured.
Fine / Standard

COLOR

This sets the color tone of the video clip:
Standard / Vivid / Sepia / B&W

PLAYBACK MENU

In the mode, choose which settings are to be used for playback.

1. Press the button.
2. Press the **MENU** button.
3. Select the desired option item with the ▲/▼ buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the ▲/▼ buttons, and press the **OK** button.
5. To exit from the menu, press the ◀ button.

DELETE

Refer to “Erasing Images” on page 16.

SLIDE SHOW

Refer to “Slideshow Display” on page 14.

DPOF

Digital Print Order Format - allows you to embed printing information on the memory card for use in card compatible printers.
Note. Memory card cannot be removed from camera.

PROTECT

Refer to “Protecting Images” on page 15.

COPY TO CARD

Allows you to copy your files from the camera’s internal memory to the upgraded memory area. Of course, you can only do this if you have a specified a memory upgrade and some files in internal memory.
*Cancel / Execute

Ref. ID 2310, Rev. A

SETUP MENU

Set your camera's operating environment.

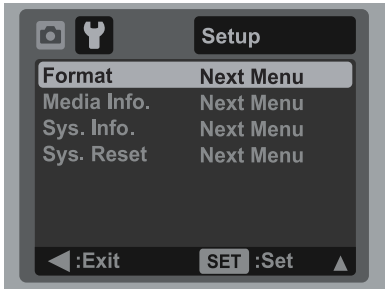
1. Press the **MENU** button.

2. Select the Setup menu with the ▶ button.

3. Select the desired option item with the ▲ /▼ buttons, and press the **OK** button to enter its respective menu.

4. Select the desired setting with the ▲/▼ buttons,and press the **OK** button.

5. To exit from the menu, press the ▼ button.



Language
Refer to "Choosing the Language" on page 7.

Auto Off
If no operation is performed for a specific period of time, the camera is automatically turned off. to conserve battery power.
1 min / 2 min / 3 min / Off

Beep
Set camera "beep" when you press the camera's buttons: On / Off.

Display
Sets the image information display state: On / Off

Fr. No. Reset
Creates a new folder for captured images and resets numbering to "0001".
Cancel / Execute

Light Freq.
When working under fluorescent lighting, select the correct frequency depending on your local area's voltage: 50Hz / 60Hz.

LCD Bright.
Select the brightness level of the LCD monitor screen: Standard / Bright.

Format
Refer to section in this manual titled "Formatting the Memory Card or Internal Memory" for further details.

Media Info.
Displays the free capacity of the internal memory or memory card.

Sys. Info.
Displays the camera's firmware version.

System Reset
Select the Execute option to restore the original factory set default settings to all camera functions.

NEVER OPEN THE BATTERY OR USB COMPARTMENTS IN A HAZARDOUS ENVIRONMENT.

SYSTEM REQUIREMENT

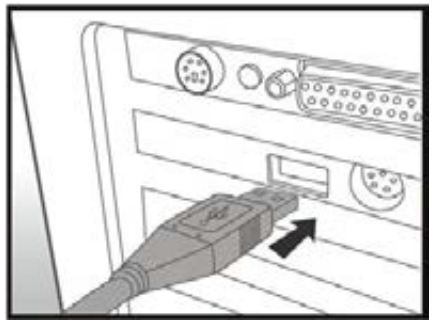
Windows	Macintosh
Pentium III 1GHz or equivalent	PowerPC G3/G4/G5
Windows 2000/XP/Vista	OS 9.0 or later
512MB RAM	256MB RAM (512MB recommended)
150MB hard disk space	128MB hard disk space
CD-ROM drive	CD-ROM drive
Available USB port	Available USB port

DOWNLOADING YOUR FILES

1. Connect one end of the USB cable to an available USB port on your computer.

2. Connect the other end of the USB cable to the USB terminal on the camera.

3. Select [PC] using the ▲/▼ buttons, and press the **OK** button.



Windows Users

1. From the Windows desktop, double click on "My Computer".

2. Look for a new "removable disk" icon.
   This "removable disk" is actually the memory (or memory card) in your camera.
   Typically, the camera will be assigned drive letter "e" or higher.

3. Double click on the removable disk and locate the DCIM folder.

4. Double click on the DCIM folder to open it to find more folders.
   Your recorded images and video clips will be inside these folders.

5. Copy & Paste or Drag-N-Drop image and video files to a folder on your computer.

Mac Users

Double-click the "untitled" or "unlabeled" disk drive icon on your desktop.
iPhoto may automatically launch.

9. TECHNICAL INFORMATION

Item	description
Image sensor	1/2.5” CMOS sensor
Effective pixels	5.0 Mega pixels
Image resolution	**Still image** 10M: 3648 x 2736 (FW interpolation), 8M: 3264 x 2448 (FW interpolation), 5M: 2560 x 1920, 3M: 2048 x 1536, 1.3M: 1280 x 960, VGA: 640 x 480 **Video clip** VGA: 640 x 480 (24 fps), QVGA: 320 x 240 (30 fps)
Recording media	16MB internal memory (12MB available for image storage)
	Supports SD/SDHC memory card (4GB or 8GB) (optional)
File format	Image format: JPEG (EXIF 2.2); video format: Motion-JPEG (AVI)
Lens	F-no.: f 3.0 Focus Length: 6.47 mm (equivalent to 39mm on a 35mm camera)
Focus range	1.45m (57.1”) ~ infinity
Shutter speed	1 - 1/1000 sec.
LCD monitor	2.36” full color TFT LCD (115.2 Kpixels)
Self-timer	10 sec delay, 2 sec delay
Exposure compensation	-2.0EV~ +2.0EV (in 0.3EV increments)
White balance	Auto, Daylight, Cloudy, Tungsten, Fluorescent (two settings)
ISO	Auto, 50, 100, 200
Interface	USB connector
Power	1 x ATEX Certifed CorDEX Instruments battery pack part number CDX2341-008
Dimensions (excluding battery)	165mm (W) x 105mm (H) x 70mm (D)
Weight	1.5kg

CorDEX INSTRUMENTS
SAFER | FASTER | BETTER

distributed by

Tollfree in Western Canada: 1-888-388-1592
microwatt.com • mwsales@microwatt.com

UK Headquarters:

Cordex Instruments Ltd
No. 6 Farfield
Main Road
Wykeham
Scarborough
YO13 9QD
UK

Copyright © 2011, CorDEX Instruments Limited.

All other brand and product names are
trademarks of CorDEX Instruments Limited.

Ref. ID 2310, Rev. A